## What is game based learning? an evaluation



Many people believe that gaming is addictive and can lead to violence, a belief that is not substantiated by research. Researchers have shown that the source of behavioral problems of young people who play video games comes from elsewhere. One study found that people who play video games spend just as much time reading, doing homework or participating in other social activities as people who do not play games at all. This raises the question: can video games be used for learning in the classroom and would they have positive results?

When education starts to feel dull, we are not being engaged or motivated, which means we are not really learning. According to Foreman we can look at the lecture as an example. With all the technology being thrown at young people today, they are going to say, " why am I sitting in this lecture listening to this person?" Learning is just not memorization; it means the act or process of acquiring knowledge or skill. Students do not need to spend more time in the classroom to learn how to think and perform. They need effective, engaging experiences that can motivate them in the learning process. Educational games can be a powerful tool for teaching and learning. These games are used to reinforce learning, they offer immediate feedback, recurring gratification and prolong the interest of learners.

## Why it works

Game-based learning is a simple concept, where games are used as a learning tool to engage students. In Jane McGonigal's book, a game is defined as an activity that has goals, rules, a feedback system, and voluntary participation (pg 100). Some pedagogical considerations that are derived from game based learning are that content and/or skills can enhance

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learning vs. traditional methods; Students can build their own games in order to learn and develop skills; They can use game mechanics in the learning environment, for example using levels instead of grades, coined gamification of the learning process.

In 2003 author, James Paul Gee wrote the book, and in it he described the impact of cognitive development with game play. Gee developed 36 different learning principles that games being used in education should have. From these principles we can look at game based learning from two perspectives. The first is learning effectiveness. The second is engagement.

When considering learning effectiveness, we can consider whether the game provides meaningful learning activity or whether the game is just a fun activity and does not necessarily lead to learning. We can look at what the learning outcomes are including memorization, knowledge, understanding, synthesis and creativity. For all these various learning outcomes, games can provide an enriched learning experience.

The second perspective, the elements of engagement from Games Based Learning (" GBL"); we can ask does the game enhance learner motivation, does the game provide a fun learning experience? Is it interesting or is it a very tedious, boring learning experience? Does it add to learner concentration? Does it get the learners full attention? And finally learning by doing, games can provide an experience where the learner has to intensely engage in various activities.

## Where is it going?

Over the last decade, research and interest in GBL has increased, as has the diversity of games themselves. Serious games and computer simulations offer an interesting context for learning because they both reinforce student motivation. Researchers found that students playing serious games or who participated in computer simulations were a lot more active as they manipulated objects. Students also had control over their actions and were more engaged in their learning. Researchers found that animation in the games increased motivation, and that students were more likely to return to activities that included animated graphics. They also found that serious games support inductive, experiential learning, with a genuine constructivism approach. Online gaming provides a context for adaptive learning, because they allow for multiple personalized paths or itineraries. Communication among players also introduces a social aspect that opens doors to knowledge acquisition with peers. Challenged-based and collaborative games are an emerging category of games that seem particularly appropriate for higher education. These games allow students to use skills for research, collaboration, problem solving, writing, leadership, digital literacy and many more. They are open-ended and occur in both online and non-digital forms. Games will undoubtedly evolve in the future and therefore GBL will also need to evolve, we are seeing new types of gaming, such as alternate reality games, social/mobile games, we are also seeing innovative new ways to use GBL.

## Conclusion

Game-based learning has gained more traction in recent years and is becoming more accessible with many benefits. Game-based learning can make learning more situated, contextualized and personalized. GBL can be used for learning content and skills, including 21st century skills like innovative problem solving and collaboration. GBL can even be used for practicing and honing existing skills. Game based-learning engages students, and if students are engaged they will embrace learning rather than view it as a tedious boring learning experience.